

REMARKS/ARGUMENTS

Claims 1-9 are pending. By this Amendment, claims 4-7 are cancelled and claims 1-3, 8 and 9 are amended. Support for the amendments to claims 1-3, 8 and 9 can be found, for example, in the present specification at page 2, line 38 to page 4, line 21, and in original claims 1-9. No new matter is added. In view of the foregoing amendments and following remarks, reconsideration and allowance are respectfully requested.

Personal Interview

Applicants appreciate the courtesies extended to Applicants' representatives by Examiner Le during the June 15, 2007 Personal Interview. Applicants' separate record of the substance of the interview is incorporated in the following remarks.

Information Disclosure Statement

The initialed Form PTO-1449 attached to the Office Action does not include an indication that each of the references cited in the September 29, 2005 Information Disclosure Statement has been considered by the Examiner (*see* EP 0 688 329). An English-language discussion of the significance of EP 0 688 329 is provided, for example, in the present specification at page 4, lines 7 to 10. Applicants respectfully request that the Examiner consider of each of the cited references, indicate such consideration on the attached Form PTO-1449, and return the initialed form to the undersigned.

Rejection Under 35 U.S.C. §112, Second Paragraph

The Office Action rejects claims 1-9 as indefinite under 35 U.S.C. §112, second paragraph. Claims 4-7 are cancelled, rendering the rejection moot as to those claims. As to the remaining claims, Applicants respectfully traverse the rejection.

The Office Action asserts that claim 1 is indefinite for reciting "low refractive" because the term "low" is not defined. Applicants submit that the term "low refractive" is term well understood by those of ordinary skill in the art. The term is used throughout, for example, U.S. Patent No. 5,607,504, which is cited in the Office Action and discussed below. One of ordinary skill in the art could readily discern whether a particular layer is a low refractive layer or a high refractive layer, and thus could readily determine whether a pigment falls within or outside of the scope of claim 1. No further specificity is required.

Claims 2, 3, 8 and 9 are rejected solely for their dependency from claim 1.

For the foregoing reasons, claims 1-3, 8 and 9 are definite. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

Rejection Under 35 U.S.C. §102

A. Schmid

The Office Action rejects claims 1-9 under 35 U.S.C. §102(b) over U.S. Patent No. 5,607,504 to Schmid et al. ("Schmid"). Claims 4-7 are cancelled, rendering the rejection moot as to those claims. As to the remaining claims, Applicants respectfully traverse the rejection.

Claim 1 recites "[a] silver-colored pigment for pigmenting macromolecular materials, comprising: a platelet-shaped aluminum substrate; and a coating provided on all sides of the aluminum substrate; wherein the coating consists of: a low refractive dielectric layer that does not absorb visible light, the layer consisting essentially of at least one of silicon dioxide and silicon oxide hydrate and having a thickness of from 250 to 450 nm; and an optional colorless outside layer comprising a surface-modifying agent that enhances compatibility of the pigment with the macromolecular materials" (emphasis added). Schmid does not disclose or suggest the pigment of claim 1.

The Office Action asserts that Schmid discloses a luster pigment including a platelet metal substrate and a coating of a low refractive dielectric layer. *See* Office Action, page 3. Notwithstanding this assertion, Schmid does not anticipate and would not have rendered obvious the pigment of claim 1.

As indicated above, the pigment of claim 1 includes a plate-shaped aluminum substrate and a coating consisting of a low refractive dielectric layer and an optional colorless outside layer. As correctly pointed out in the Office Action, Schmid discloses a luster pigment including a platelet-shaped metallic substrate coated with a low refractive dielectric layer that does not absorb visible light. *See, e.g., Schmid*, column 1, lines 4 to 6. The pigment of Schmid differs from the pigment of claim 1, however, in that the pigment of Schmid includes a further high refractive index layer. *See Schmid*, column 1, lines 7 to 8. Claim 1 excludes such further high refractive index layer from the recited coating. As agreed during the personal interview, the "consisting of" language of claim 1 distinguishes the pigment of claim 1 over the pigment of Schmid.

During the personal interview, the Examiner and Applicants' representatives discussed the issue of whether the intermediate formed in preparing the pigment disclosed in Schmid (i.e., the intermediate product obtained in producing the pigment of Schmid before the high refractive layer is applied) is relevant to the pigment of claim 1. *See, e.g., Schmid*, column 8, lines 11 to 12. Applicants submit that Schmid includes no disclosure of a pigment that does not include a high refractive layer and that has a low refractive layer having a thickness of from 250 to 450 nm. While Schmid includes general disclosure of a low refractive layer having a thickness of from 10 to 800 nm and preferably from 50 to 600 nm, which encompasses the range recited in claim 1, Schmid includes no specific disclosure of a low refractive layer having a thickness falling within the narrower range 250 to 450 nm recited in claim 1. A prior art reference disclosing a broad range will not anticipate a narrower range

unless the prior art reference also describes the narrower range with specificity. *See, e.g., Atofina v. Great Lakes Chemical Corp.*, 78 U.S.P.Q.2d 1417, 1423-24 (Fed. Cir. 2006) (stating that prior art disclosure of temperature range of 100 to 500 °C does not anticipate claimed range of 330 to 450 °C because considerable difference between ranges would not permit conclusion that prior art describes claimed range with sufficient specificity to anticipate). In fact, Schmid indicates that a low refractive layer in a pigment also including a high refractive layer (as in the pigment obtained from the intermediate discussed above) should have a thickness of from 10 to 200 nm, which is outside of the range recited in claim 1. As Schmid does not include specific disclosure of a low refractive layer having the thickness recited in claim 1, the intermediate of Schmid cannot anticipate the pigment of claim 1.

As discussed in the present specification, the present inventors discovered that it is possible to obtain a silver-colored metallic effect pigment that has a high lightness near gloss angle, a pronounced lightness flop, and advantageous mechanical properties, particularly in the coloration of plastics, by preparing a pigment as recited in claim 1. *See, e.g.,* present specification, page 2, line 38 to page 3, line 5. Schmid does not disclose or suggest a pigment having the structure and composition recited in claim 1, or recognize the benefits stemming therefrom.

As Schmid fails to disclose or suggest a pigment including a platelet-shaped aluminum substrate and a coating consisting of a low refractive dielectric layer having a thickness of from 250 to 450 nm and an optional colorless outside layer, Schmid fails to disclose or suggest each and every feature of claim 1.

As explained, claim 1 is not anticipated by Schmid. Claims 2, 3, 8 and 9 depend from claim 1 and, thus, also are not anticipated by Schmid. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

B. Coulter

The Office Action rejects claims 1-3, 5, 6, 8 and 9 under 35 U.S.C. §102(b) over WO 99/35194 to Coulter et al. ("Coulter"). Claims 5, 6 and 8 are cancelled, rendering the rejection moot as to those claims. As to the remaining claims, Applicants respectfully traverse the rejection.

As indicated above, claim 1 recites "[a] silver-colored pigment ... comprising: a platelet-shaped aluminum substrate; and a coating provided on all sides of the aluminum substrate..." (emphasis added). Coulter does not disclose or suggest such a pigment.

The Office Action asserts that Coulter discloses a pigment including a metal substrate and a coating of a dielectric layer. *See* Office Action, page 3. Notwithstanding this assertion, Coulter does not anticipate and would not have rendered obvious the pigment of claim 1.

As indicated above, the pigment of claim 1 requires a coating provided on all sides of an aluminum substrate. The Office Action correctly points out that Coulter discloses a pigment formed by, first, coating both sides of a film of reflective material with a dielectric material having a low refractive index. *See, e.g., Coulter*, page 6, lines 7 to 32. The coated film is fractured to form pigment flakes. *See, e.g., Coulter*, page 9, lines 7 to 20. Because the coated film is fractured after coating the film, the individual pigment flakes of Coulter do not include dielectric material at the edges. As agreed during the personal interview, Coulter fails to disclose or suggest such a pigment including a coating provided on all sides of an aluminum substrate.

The advantages stemming from the particular composition and structure of the pigment of claim 1 are discussed above. As with Schmid, Coulter does not disclose or suggest a pigment, or recognize the benefits stemming therefrom.

As Coulter fails to disclose or suggest a pigment including a coating provided on all sides of an aluminum substrate, Coulter fails to disclose or suggest each and every feature of claim 1.

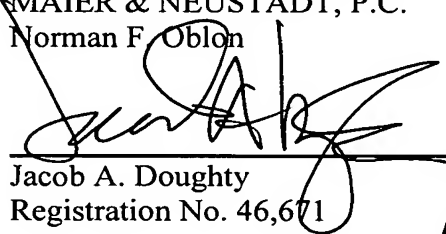
As explained, claim 1 is not anticipated by Coulter. Claims 2, 3 and 9 depend from claim 1 and, thus, also are not anticipated by Coulter. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

Conclusion

For the foregoing reasons, Applicants submit that claims 1-3, 8 and 9 are in condition for allowance. Prompt reconsideration and allowance are respectfully requested.

Respectfully submitted,

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Attachment:

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